

REMARKS

The specification and claims have been carefully reviewed in light of the examiner's action. Applicant hereby affirms the election of claims 1-6, and 9-10 without traverse. Claim 1 has been amended for clarification. Claim 2 has been amended to more clearly define the invention. Claims 7, 8, 9, 11, and 12 have been cancelled. Claim 10 has been amended to overcome the Examiners improper form objection.

Before taking up the claims in detail attention will be given to the patents cited by the Examiner in rejecting the claims. The US Patent to Xue, No. 5,928,812, discloses solid state rechargeable lithium-ion cells which are reported to have improved shelf life, cycle life and reduced impedance growth. The Xue patent calls for a non-cathode active lithium compound containing one or more non-metallic elements, substantially insoluble in the non-aqueous electrolyte of the cell, which is dispersed throughout the cathode, and within at least one of the anode or separator. Applicants' compound additive is not in the anode or separator. Xue's compound does not reduce or eliminate the irreversible lithium loss from the cathode, which occurs on the initial charging cycle of the cell, nor does his patent even contemplate such action. Accordingly Xue does not anticipate applicants' claims 1-6, and 10.

The US patent to Endo et al. No. 6,022,641, discloses a non-aqueous electrolyte secondary cell, which comprises a cathode, which is restricted to using manganese oxide, or lithium-manganese

oxide combined with sodium carbonate, which are said to retain the discharge capacity over time of the cell. The Endo et al compound does not reduce or eliminate the irreversible capacity loss upon initial charging of the cell, nor does it even contemplate such action. Accordingly Endo et al does not anticipate applicants' claims 1-6, and 10.

The US Patent Application Publication to Zhang No. US 2002/0119375 A1, discloses the use of Lithium Borate in non-aqueous rechargeable lithium batteries to reduce the fade capacity after cycling. This publication is limited to the use of lithium borate powder in a cathode powder, which contains a transition metal oxide powder, which composition is said to reduce the fade capacity of the battery. Zhang does not disclose or discuss the reduction or elimination of the irreversible capacity loss upon initial charging of the cell, nor does it even contemplate such action. Accordingly Zhang does not anticipate applicants' claims 1-6, and 10.

Claim 1 calls for a cathode composition for use in the cathode of lithium-ion cells, which has a lithiated cathode material, and a lithium compound additive, which additive reduces or eliminates the initial irreversible capacity loss of the cells upon initial charging. Claim 1 is not anticipated by the patents cited by the Examiner, and defines novel and patentable subject matter.

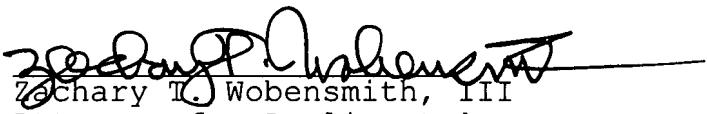
Claim 2 calls for a cathode composition for use in the cathode of lithium-ion cells, which has a lithiated cathode material, and a lithium compound additive therein, which additive is selected from the group comprising: lithium carbonate, lithium sulfite,

lithium oxide, lithium nitride, lithium borate, lithium fluoride, lithium oxolate, and their mixtures, which additives reduce or eliminate the irreversible capacity loss of the cells upon initial charging. Claim 2 is not anticipated by the patents cited by the Examiner, and defines novel and patentable subject matter.

Claims 3, 4, 5, 6, and 10, dependent directly or indirectly on claims 1 or 2, also define patentable subject matter not disclosed in the patents cited by the Examiner.

Accordingly it is believed that the application is in condition for allowance, and such action is requested and urged.

Respectfully submitted,


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